

Interim Best Management Practices for Bridge Inspection and compliance with the Migratory Bird Treaty Act

April 2006

Objective

This guidance was developed to provide interim guidance to the bridge inspection office on how to comply with the Migratory Bird Treaty Act (MBTA).

What types of activities does this guidance apply to?

The following activities that are conducted by the Bridge Inspection office

- Use of a UBIT, bucket truck, or other aerial work platform. Primarily scanning bridge at a distance of 15 to 20 feet.
- Pre-inspection cleaning and washing completed by maintenance (large areas) or by inspectors (small areas). Walk through inspection, including use fall protection systems. This is primarily a scanning inspection also.
- Ultrasonic, dye penetrant, and magnetic particle non-destructive testing. All three of these activities include surface preparation (hand wiping, hand wire brushing, powered wire brushing, powered sanding/grinding) and final treatment (hand wiping, spray painting). These tests typically take from 10 to 30 minutes to complete. Noise from the ultrasonic test is in the range of 2-5 Mhz and 20 to 60 dB. Dye penetrant testing uses chemicals that may affect wildlife, however, only completed on approximately 3 bridges per year. Approximately 65 bridges in Washington have steel pins that require testing.
- In water wading and diving inspections of bridge abutments and piers. These typically take 10 to 30 minutes to complete.
- Drilling timber members – involving the use of a handheld drill to sample wood timbers. Timber members are only present at 100 bridges in Washington.
- Use of hand hammers on timber, concrete and steel for a few minutes depending on location and condition. Hammers are used to disclose unsound areas of the structure.
- Use of focused lights (generally strong flashlights).
- Conducting soundings to create stream or river profiles thorough the use of a tape measure with weight that is dropped from deck to measure opening under bridge to ground level.
- Use of manually propelled and motorboats to conduct scanning inspections of bridge piers, abutments and other areas only visible from underneath. Motorboats have 150 to 200 HP motors.

What kinds of activities violate the MBTA and state laws protecting nesting birds?

- Removal of nests containing eggs or young of migratory and protected bird species.
- Activities which cause the death of adult or young birds –i.e., activities which would cause pre-fledge young to leave nest prematurely or adults to abandon eggs or young.
- Removal (without replacement) of nests, which are used by protected birds year after year (mainly a WDFW concern for osprey nests)

Does it mean that activities that require the removal of a nest with eggs or young could never occur?

- No - removal of nests with eggs or removal of young may occur provided all appropriate permits are obtained. Blanket coverage permits are not obtained by WSDOT at this time. Permits are obtained on an as-needed basis and it can be difficult and time consuming to obtain them.

What activities can be performed during emergency inspections?

- Inspection activities completed for emergency situations do not have to follow the interim best management practices (BMP). The regional biologist should be contacted if protected species were encountered during the emergency inspection. If possible contact them beforehand for assistance.

What are the species-specific concerns?

Peregrine Falcons

Nesting characteristics

Nesting season: February 1-July 15 under normal circumstances*

Sensitive period (days of incubation and fledging): 33-35 days incubation; 60 days to fledging (young leave the nest)

Nest structure: No nest is constructed; nest is a depression in dirt and gravel on a flat protected surface

Nest location: Typically below bridge deck on a flat surface, sometimes inside structural cavities on bridge girders.

Nest guarding behavior: Aggressive

Number of bridges in Washington with peregrines documented to date: 15

* The time frame given is the typical time of year that birds may be nesting in Washington. There are a number of factors that can influence how long it takes them to complete their cycle. Some birds start later and get done later in the time period while other birds start right at the beginning of the nesting period and may be done early, some may lose one set of eggs and begin all over- taking up most of the nesting season. Once the birds have fledged and are capable of flying, there would be no concerns about inspection activities except for safety of the inspectors.

Appendix A contains a list of bridges where peregrine falcons have been observed occurring on a regular basis. They may not be nesting on all of these bridges every year (i.e., Nesting has not been confirmed on Hood Canal Bridge, but the regular occurrence of peregrines on the bridge has been documented). Some bridges are managed by ODOT, and are not of concern for WSDOT bridge inspectors. However, the trend in the Columbia Gorge has been towards peregrines occupying every bridge.

Concerns

- Abandonment of eggs or chicks.
- Startling adult off the nest resulting in eggs or young being pushed out of the nest.
- Early fledging of young leading to their demise.
- Safety of inspectors – peregrines are very aggressive when defending a nest

Inspection recommendations

The following inspection recommendations are listed in order of preference.

1. Inspect bridge outside of nesting season.
2. If inspection during nesting season is required, inspect outside the incubation and fledging period. Contact a headquarters biologist at least one month in advance (or as soon as possible) to help determine nesting status. The headquarters biologist will coordinate with regional biologists.
3. If inspection during incubation/fledging period is required, inspect the portions of the bridge that are not used for nesting using biologist support to defining a site-specific buffer zone. The biologist may observe inspections and determine what distances from activities cause species disturbance.
4. If inspection near active nest is required, coordinate with a headquarters biologist to create a site-specific inspection plan (see contact information in Appendix B). The plan may consider time of year, status of nesting pair, nest location; inspection activities that need to occur near the nest, etc. The plan may allow bridge inspection to occur without restrictions; may allow inspection of most of the bridge, leaving a site-specific buffer zone around the nest; may allow for a short period of inspection in the nest area or, may suggest rescheduling bridge inspection to a different time. Nesting period may not be as long as specified above, the biologist can inspect the nest to see if it still active or if fledging has occurred. Nests and nesting debris can be removed after active nesting period has been completed.

Osprey

Nesting characteristics

Nesting season: April 1-September 30 under normal circumstances

Sensitive period (days of incubation and fledging): 38-48 days incubation; 49-56 days to fledging

Nest structure: Small branches and herbaceous plants woven into circular structure

Nest location: Nests are normally located on the high point of the bridge – on the superstructure. Nests have been observed on luminaries also.

Nest guarding behavior: aggressive

Number of bridges with Ospreys documented to date: 8

Appendix A contains a list of bridges where ospreys have been observed nesting.

Concerns

- Abandonment of eggs or chicks.
- Early fledging of young leading to their demise.
- Permanent removal of nest

Inspection recommendations

The following inspection recommendations are listed in order of preference.

1. Inspect bridge outside of nesting season.
2. If inspection during nesting season is required, inspect outside the incubation and fledging period. Contact a headquarters biologist at least one month in advance (or as soon as possible) to help determine nesting status. The headquarters biologist will coordinate with regional biologists.
3. If inspection during incubation/fledging period is required, inspect the portions of the bridge, which are not used for nesting using biologist support to define a site-specific buffer zone. The biologist may observe inspections and determine what distances from activities cause species disturbance.
4. If inspection near active nest is required, coordinate with a headquarters biologist to create a site-specific inspection plan (see contact information in Appendix B). The plan will consider time of year, status of nesting pair, nest location, etc. The plan may allow bridge inspection to occur without restrictions; may recommend avoiding a site-specific buffer zone around the nest; or, rescheduling bridge inspection to a different time. Note that the nesting period may not be as long as specified above, the biologist can inspect the nest to see if it still active or if fledging has occurred.
5. If necessary, temporary removal of nest may be possible, but must be coordinated with Washington Department of Fish and Wildlife (WDFW). Permanent removal will require approval from WDFW.

Pelagic Cormorants

Nesting characteristics

Nesting season: March 15-October 15 under normal circumstances

Sensitive period (days of incubation and fledging): 26-37 days incubation; 47-49 days to fledging

Nest structure: seaweed, twine, guano, nest disintegrates quickly after young fledge

Nest location: Typically below bridge deck on open steel ledges

Nest guarding behavior: adults none- older juveniles will vomit

Number of bridges with cormorants documented to date: 2

Appendix A contains a list of bridges where cormorants have been observed nesting.

Concerns

- Abandonment of eggs or chicks.
- Early fledging of young leading to their demise.
- Large number of cormorants nesting on bridge at the same time; estimated 300 pair. These large colonies leave very little of the bridge unoccupied.

Inspection recommendations

The following inspection recommendations are listed in order of preference.

1. Inspect bridge outside of nesting season.
2. If inspection during nesting season is required, coordinate with a headquarters biologist to create a site-specific inspection plan (see contact information in Appendix B). If there are large numbers of cormorants on a bridge, inspection of the underside steel structure will be difficult if not impossible to complete without mortality of young during the nesting season. Nests and nesting debris can be removed outside the active nesting period. Most nest materials fall off the bridge and are no longer visible after fledging occurs.

Owls (barn (most common), great-horned, sawwhet, screech on occasion)

Nesting characteristics

Nesting season: March 1-July 31 under normal circumstances; may have 2 broods per year

Sensitive period (days of incubation and fledging): 32-34 days incubation; 70-84 days to fledging

Nest structure: ranges from none to nest constructed from grass, sticks and other materials in a crevice or cavity; sawwhet and screech owls nest in cavities.

Nest location: Typically below the bridge deck on ledges or cavities under bridge

Nest guarding behavior: aggressive for great horned to passive for the others

Number of bridges with owls documented to date: unknown, but they are common

Concerns

- Abandonment of eggs or chicks.
- Impacts to nests (eggs and young) from bridge cleaning and washing for inspection (e.g., flooding of nests)
- Early fledging of young leading to their demise.

Inspection recommendations

1. No seasonal restrictions provided nests with eggs and young are not removed and bridge inspection and pre-inspection activities such as washing do not harm eggs or young or prevent parental care of eggs or young (e.g., activities that would drive birds off their nests long enough to chill and kill the eggs, or prevent adults from feeding the young for a period of time).
2. If nests contain eggs or young and activities require removal or moving of nest, contact the regional biologist for assistance (see contact information in Appendix B).

Swallows (barn, cliff, violet green)

Nesting characteristics

Nesting season: April 15-September 15 under normal circumstances; may have 2 broods per year

Sensitive period (days of incubation and fledging): 15-16 days incubation; 25-37 days to fledging

Nest structure: All nest on underside of bridge. Barn swallows create mud cup shaped nest that is open at top, nest as single pair. Cliff swallows are colony nesters that create a gourd shaped nest out of mud. Violet-green swallows create grass nests in cavities under a bridge and normally nest as single pair.

Nest location: Typically below bridge deck attached to underside of bridge; violet-green swallows may nest in cavities

Nest guarding behavior: passive

Number of bridges with swallows documented to date: unknown, most bridges may have swallows.

Concerns

- Loss of nest with eggs or chicks due to pre-inspection cleaning activities.
- Need to remove nest located in area that requires inspection.
- Early fledging of young leading to their demise.

Inspection Recommendations

1. No seasonal restriction to bridge inspectors provided nests with eggs and young are not removed or harmed, and activities do not prevent parental care of eggs or young (e.g., activities that would drive birds off their nests and prevent adults from feeding the young for a period of time).

2. If nests contain eggs or young and activities require removal or moving of nest, contact a headquarters biologist for assistance (see contact information in Appendix B).

Pigeon Guillemots

Nesting characteristics

Nesting season: April 1 - August 31 under normal circumstances; may have 2 broods per year

Sensitive period (days of incubation and fledging): 26-33 days incubation; 28-39 days to fledging

Nest structure: Typically nest structure may consist of a pile of debris, pebbles, or shell scraps. Colony nesters.

Nest location: Nest on ledges or within cavities. Nest locations may be reused from year to year.

Nest guarding behavior: passive

Number of bridges with pigeon guillemots documented to date: 1

Appendix A contains a list of bridges where guillemots have been observed nesting.

Concerns

- Abandonment of eggs or chicks
- Nest and young disturbance during pre-inspection cleaning activities.
- Need to remove or move nest to complete inspections
- Early fledging of young leading to their demise.

Inspection Recommendations

The following inspection recommendations are listed in order of preference.

1. Inspect bridge outside of nesting season.
2. If inspection during nesting season is required, inspect outside the incubation and fledging period. Contact a headquarters biologist at least one month in advance (or as soon as possible) to help determine nesting status. The headquarters biologist will coordinate with regional biologists.
3. If inspection during incubation/fledging period is required, inspect portions of the bridge not occupied by guillemots and coordinate with a headquarters biologist to determine a site-specific buffer zone.
4. If inspection near an active nest is required, coordinate with a headquarters biologist to create a site-specific inspection plan (see contact information in Appendix B). The plan will consider time of year, status of nesting colony, nest locations, etc. The plan may allow bridge inspection to occur without restrictions; avoiding of a site-specific buffer zone around the nest sites; or rescheduling bridge inspection to a different time.

Appendix A: Bridges with documented occurrences of Cormorants, Osprey, Peregrine Falcons, and Pigeon Guillemots

This list has been intentionally left off the website. For the most current list of bridges with documented occurrences of the species listed above, contact the WSDOT Headquarters Biology Program (see Appendix B for contact information).

Appendix B: WSDOT Biologist Contact List – updated April 18, 2006

WSDOT Office Contact Information	WSDOT Biologist Contact Information
<p>Headquarters Office 310 Maple Park Avenue SE Olympia, WA 98504-7308 Phone: 360-705-7491</p>	<p>Marion Carey Fish and Wildlife Program Manager Phone: 360-705-7404 Email: careym@wsdot.wa.gov</p> <p>Tracie O'Brien Wildlife Biologist Phone: 360-705-7426 Email: obrient@wsdot.wa.gov</p> <p>Victoria Fursman Wildlife Biologist Phone: 360-705-6963 Email: fursmv@wsdot.wa.gov</p> <p>Craig Broadhead Senior Biologist Phone: 360-705-7402 Email: broadhc@wsdot.wa.gov</p> <p>Sharon Vecht Fish and Wildlife Biologist Phone: 360-705-7254 Email: vechts@wsdot.wa.gov</p>
<p>Northwest Region 1 Office 15700 Dayton Avenue North Seattle, WA 98133-9710 Phone: 206-440-4000</p>	<p>Brian Bigler Assistant Biology Program Manager Phone: 206-440-4519 Email: biglerb@wsdot.wa.gov</p> <p>Michael MacDonald Wildlife Biologist Phone: 206-440-4909 Email: macdonm@wsdot.wa.gov</p>
<p>North Central Region 2 Office 1551 N Wenatchee Ave. Wenatchee, WA 98807-0098 Phone: (509) 667-3000</p>	<p>Claton Belmont Regional Environmental Manager Phone: 509-667-3055 Email: belmonc@wsdot.wa.gov</p>
<p>Olympic Region 3 Office 5720 Capitol Boulevard Tumwater, WA 98504-7440 Phone: 360-357-2600</p>	<p>Carl Ward Regional Biologist Phone: 360-570-6706 Email: wardc@wsdot.wa.gov</p> <p>Tara Chestnut Fish and Wildlife Biologist Phone: 360-570-6739 Email: chestnt@wsdot.wa.gov</p>

<p>Southwest Region 4 Office 11018 NE 51st Circle Vancouver, WA 98682-6686 Phone: 360-905-2000</p>	<p>Ryan McReynolds Biologist Phone: 360-905-2178 Email: mcreynr@wsdot.wa.gov</p> <p>Angie Haffie Biologist Phone: 360-905-2176 Email: haffiea@wsdot.wa.gov</p> <p>Michelle Guay Biologist Phone: 360-905-2186 Email: guaym@wsdot.wa.gov</p>
<p>South Central Region 5 Office 2809 Rudkin Road Union Gap, WA 98903 Phone: 509-577-1600</p>	<p>Geoff Gray Regional Biologist Phone: 509-577-1756 Email: grayg@wsdot.wa.gov</p>
<p>Eastern Region 6 Office 2714 North Mayfair Street Spokane, WA 99207-2090 Phone: 509-324-6000</p>	<p>LeeAnn D Hancock Regional Biologist Phone: 509-324-6137 Email: HancocL@wsdot.wa.gov</p> <p>Ervin Koller Biologist – Regional Maintenance Environmental Coordinator Phone: 509-324-6133 Email: kollere@wsdot.wa.gov</p>